TEMPORARY QUENCH PROTECTION BYPASS PROCEDURE

Introduction:

THIS PROCEDURE SHALL BE USED ONLY UNDER STRICT ENGINEERING CONTROL!!!

IF YOU TURN ON THE P.S. IT IS NOT RECOMMENNDED THAT YOU RUN CURRENT THROUGH THE OUTPUT OF THE P.S. IF YOU MUST RUN CURRENT THROUGHT THE OUPUT OF THE P.S. DO NOT EXCEED 1% OF THE P.S. MAXIMUM CURRENT OUPUT RATING.

1. The purpose of this procedure is to bring up the main quench link in only one service building for testing purposes only. The main quench link is the one for the nested quad and dipole p.s.'s in the service buildings. This does not apply to the tq's.

2. Make sure you check with MCR before you follow this procedure. They must give you approval..

3. Make sure you ask MCR if anyone else (at the lab or from home) is working on ANY RHIC p.s.'s.

4. You cannot use this procedure if anyone else is also working on any RHIC p.s.'s at the same time. There are some exceptions.

Procedure:

1. First you should bring up the quench detector page for the building you are working in and also for the correct ring you are working in. As an example let us assume you want to bring up the yellow link in 1012A and you want to turn on p.s. yi11-qf1.

2. If you want to bring up the yellow link in 1012A first bring up cfe-12a-qd2. the quench detector for yellow is always qd2 and the quench detector for blue is always qd1. Go to the pet tree and click on:
FECS->then click on->QUENCH->then click on-> CFE-12A-QD2. Hold onto this pet page for now. If you wanted to bring up the qd1 quench detector for blue in 1012A you would click on FECS->then click on->QUENCH->then click on-> CFE-12A-QD1. If you are working in another building just substitute the building you are in for 12A and follow the same procedure.

3. Next bring up the TempQPBypass Page. Use the Pet Tree again. To bring this up MIDDLE click on:
FECS-> MAGNETS->SUMMARY-> TEMPQPBYPASS. Hold onto this pet page.

4. Next bring up the QPACTRL pet page for the building you are in using the Pet Tree. For this example we are in 1012A so you MIDDLE click on:
FECS-> MAGNETS->CFE-12A-PS2-> QPACTRL. Hold onto this pet page.
You should now that all of the QPACTRL pet pages reside in PS2 for all of the service buildings *except 1004B and 1010A*. For example in 1002B you would Middle click on:
FECS-> MAGNETS->CFE-2B-PS2-> QPACTRL
Just substitute the building and you can find any QPACTRL pet page. In 1004B the QPACTRL pet page is in PS4 and in 1010A the QPACTRL pet page is in PS3

5. Next bring up the magnets pet page for the ring and building you are working in. If you are in 1012A working on the yellow ring MIDDLE click on:
FECS-> MAGNETS->CFE-12A-PS2-> MAGNETS. Hold onto this pet page
If you want to work in blue then substitute PS1 for PS2. If you want to work in another building then substitute that building name for 12A.

6. Now you can start to bring up the yellow link in 1012A.

7. The first thing you do is go to the **CFE-12A-QD2** pet page and look for the box that says QD COMMAND. Click on this box with the left mouse button and hold it. You will get a drop down menu. Move down and select RESET YELLOW RING. Let go of the mouse button and the words RESET YELLOW RING should appear in the box. Hit the return button to send this command and it should disappear and the words QD COMMAND should now return to the box.

8. Next look for the pet page called **TEMPQPBYPASS**. Go to the Location 12A. You will see a box next to 12A that has one of 4 possible words in it. These possibilities are Neither, Blue, Yellow or Both. Since we want to bring up the Yellow link in 12A you should click on this box with the left mouse button and a drop down menu will appear. Select BLUE and let go of the mouse button. Now the box says BLUE. Hit return to send this command. This means the blue link will stay up and the yellow link will come down. If you selected YELLOW this would mean the yellow link will stay up and the blue link will come down. Neither means both links will come down. Both means both links will come up. Anyway you selected BLUE for this example. If you need to bring the link up in 10A you will notice there are 2 boxes next to the location 10A. The left most box is for the p.s. qpa's. The right most box is for the big quench switches in 10A. Use both of these boxes in this building. This means whatever you select for one you should select for the other.

9. Next go to the **QPACTRL** pet page for 1012A. There are 3 groups of RESET and READ buttons. Click on each RESET button with the left mouse button. It will turn RED. Send the command by hitting the ENTER button. The box should change color from RED to GRAY after you hit the ENTER button. Do this for all three RESET buttons.

10. Now go to the magnets pet page you brought up for 1012A. This would be called **MAGNETS.** You must go through all of the yellow power supplies on this page and send a RESET command. Make sure the p.s. is in the STANDBY state first. You do not need to send a RESET command to any p.s. that has a "TQ" in the sitewide name. You can skip the "TQ's". You send a RESET command by looking for the box under the words "SET STATE". Left click on this box. A drop down menu will appear and select RESET then let go of the left mouse button. Hit ENTER to send the command. You should see all of the faults clear. Do this for all of the yellow p.s.'s on this page except the "TQ's". All of the faults must clear on all of the p.s.'s.

11. Now go back to the **TEMPQPBYPASS** pet page. Go to the 12A location again and select BOTH in the box next to 12A with the left mouse button and then hit the ENTER button to send the command. All of the yellow QPA's should now be on in the building. You should hear the fans spinning.

12. Go to the **QPACTRL** pet page. Left click on the READ button for all 3 groups and send the command with the ENETR button. You may have to do this a few times but then the word "ON" should appear next to all of the yellow qpa names.

13. The yellow link is now up. You can turn ON one p.s. if you are testing it but you have to limit how much current it puts out because the p.s.'s in the other buildings are not up. See next step.

14. You should limit the current output to 1% of the maximum current rating of the p.s. So if you have a p.s. rated for 150A you should not put more than 1.5A on the output of the p.s.

15. When you are done you should bring the link down and hand it back over to MCR.